

Breaking the Taboo on "Toilet to Tap"

Posted by **BRYAN WALSH** Wednesday, August 10, 2011 at 12:28 pm

As I wrote in [this week's Going Green column](#), the American South is gripped by a terrible dry spell, one lasting for months. In Texas alone, [99.93% of the country](#) is in some state of drought. These are extreme times—and they call for extreme measures. Like drinking urine—sort of.

In a sense, that's what one Texas town is ready to do. As Discovery News [reported earlier this week](#), the town of Big Spring in parched West Texas has broken ground on a plant that will capture treated wastewater and use it for recycling. It won't exactly be direct "toilet to tap"—rather, the plant will take treated wastewater that would usually be discharged into a creek or lake, and instead blend it with potable water supplies. In effect, the recycling method speeds up what happens when the water mixes in natural wetlands. But the concept still makes people edgy, as Terry Telchik of Big Spring's told Discovery's Irene Klotz:

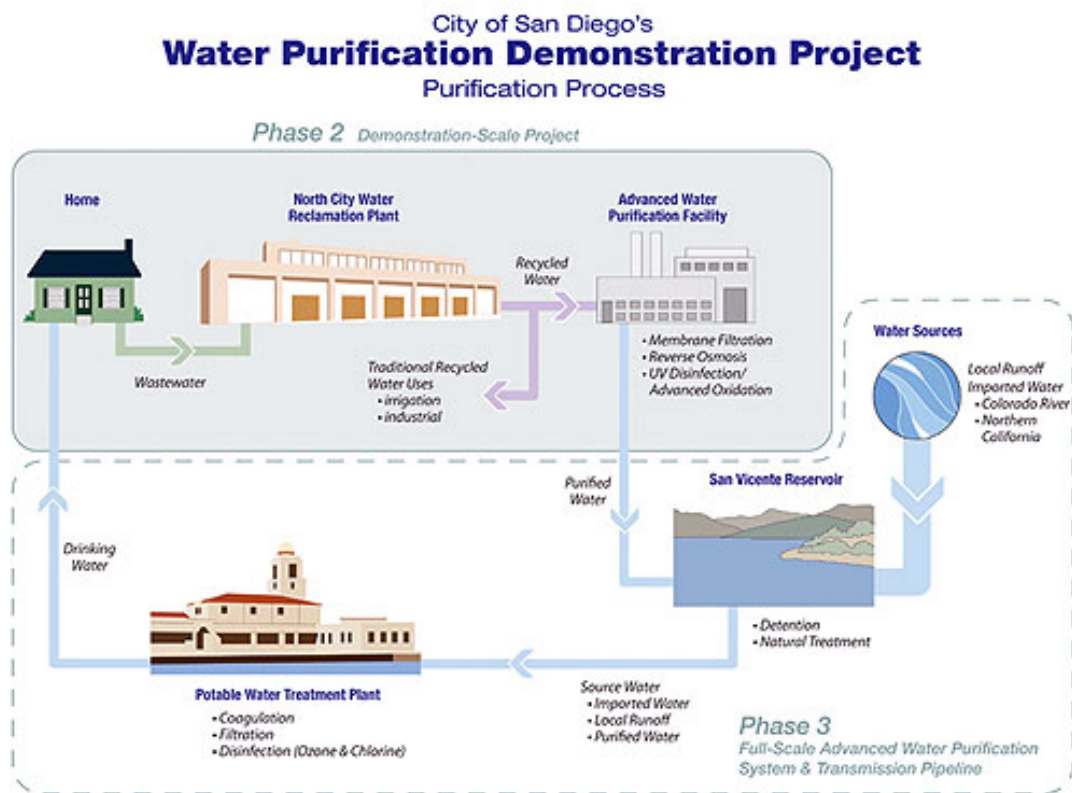
When you talk about toilet-to-(water) tank it makes a lot of people nervous and grossed out... [But] we're going through a really bad drought.

Natural disasters will make people a little more receptive to out-of-the-box ideas than they might otherwise be. But really, recycling water—even if it is toilet-to-tap—is something we should all be ready to embrace, especially in the arid West. Putting aside this year's record-breaking drought, more and more people are moving to the dry areas of the West and the Southwest—to cities like Austin, San Antonio, Phoenix and Las Vegas. Even if severe droughts like this one stay relatively rare—and climate change doesn't intensify the region's aridity, as it's expected to do—more people will be using more water in places that simply don't have a lot of it. Something has to give.

In fact, cities have long [recycled water for certain uses](#)—calling it grey water—like watering golf courses and landscapes. But as Eilene Zimmerman describes [in this 2008 Slate story](#), public squeamishness has in the past curtailed any attempts to recycle treated sewage water for use in taps:

Surveys like one taken **last year in San Diego** show that a majority of us don't want to drink water that once had poop in it, even if it's been cleaned and purified. A **public outcry** against toilet-to-tap in 2000 forced the city of Los Angeles to shut down a \$55 million project that would have provided enough water for 120,000 homes. Similar reluctance among San Diego residents led Mayor Jerry Sanders to veto the city council's approval in November of a pilot program to use recycled water to supplement that city's drinking water. (A similar plan failed once before in 1999.)

But as Western cities—and their citizens—come to grips with repeated water shortages, public opinion is beginning to change. Those same San Diegans who rejected water recycling a few years ago are now in the middle of a **one-year, \$11.8 million pilot project** for a toilet-to tap system that works like this:



Nor is San Diego alone in exploring the potential of recycled water. I had a chance a few years ago to visit Orange County—that's right, **the O.C.**—and its new water treatment center, which had just launched **an indirect reuse system**:

The result is the Groundwater Replenishment System (GRS), a glistening, \$480 million facility that sits next to an older sewage-treatment plant. The GRS takes in about 70 million gal. of wastewater a day, puts it through a multistep

cleaning process, then discharges the treated water into Orange County's aquifers. About half forms a barrier against seawater, which has been infiltrating groundwater sources as the county has dried up, while the other half slowly filters into the aquifers that supply drinking water for the county's 2.3 million residents. The GRS is believed to be the world's largest facility dedicated to what's known as indirect potable reuse (if you're in favor of it) or toilet-to-tap (if you're not). But there's a better term: water recycling, and it might be the world's answer to the clean-water crisis. (See pictures of the world's water crisis.)

The concerns about water safety seem unfounded. Orange County's system uses reverse osmosis, forcing water at high pressure through hundreds of tubes that are filled with tightly wound plastic membranes—tight enough to stop almost any nonwater molecules, including viruses and trace pharmaceuticals. What's left is as pure as distilled water—and it tastes just fine, as I can tell you from personal experience.

Right now, nearly 1 billion people lack access to clean water, and by 2025, 1.8 billion people are expected to be living in areas that experience extreme water scarcity. That's going to include the tens of millions of Americans who will live in fast-growing but dry areas like Arizona, Nevada, Texas and southern California. With more straws dipping into our water reservoirs—and the very real possibility that climate change could further dry out the West—we can't afford to waste it down the toilet. If water recycling is good enough for astronauts, it should be good enough for us too.

Read more: <http://ecocentric.blogs.time.com/2011/08/10/breaking-the-taboo-on-toilet-to-tap/#ixzz1Ueg5ciYm>

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